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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/642,542

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Jun Ishii

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EXAMINER

QIN, JIANCHUN

ART UNIT

PAPER NUMBER

2837

DATE MAILED: 05/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/642,542

Applicant(s)

ISHII ET AL.

Examiner

Jianchun Qin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-33 is/are allowed.
- 6) ☒ Claim(s) 1,4,11,12 and 15 is/are rejected.
- 7) ☒ Claim(s) 2,3,5-10,13 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Neuman (U.S. Pub. No. 20030103076) in view of Murakami (U.S. Pat. No. 4594930).

Regarding claim 1, Neuman teaches a recorder for recording a performance represented by pieces of first sort of music data in ensemble with a playback of a music passage represented by pieces of second sort of music data different in format from said first sort of music data (see Abstract), comprising: an interface connected to a data source of said pieces of said first sort of music data, another data source of said pieces of said second sort of music data and a destination to which a music data file is supplied (sections 0048, 0032, 0033 and 0039); and a data processing unit connected to said interface, extracting pieces of reference characteristic data representative of particular features of an audio signal expressing said music passage from said pieces of said second sort of music data, and forming said pieces of said first sort of music data, said pieces of reference characteristic data and pieces of time data representative of timing to reproduce tones produced in said performance into said music data file for supplying

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said music data file through said interface to said destination (sections 0030, 0031 and 0049).

Neuman does not mention expressly: said pieces of reference characteristic data representative of particular features of an audio waveform expressing said music passage.

Murakami teaches a method of waveform analysis used for synchronizing playback of music files, including: a data processing unit that extracts and stores pieces of reference characteristic data representative of particular features of an audio waveform expressing a master music source, wherein said pieces of reference characteristic data are used for synchronization between selected music sources (col. 2, lines 19-57; cols. 2-3, lines 64-5; col. 5, lines 32-46 and cols. 7-8, lines 24-11).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Murakami in the invention of Neuman et al. in order to provide a data processing unit for accurately synchronizing playback of music files stored in the form of waveforms (Murakami, col. 1, lines 26-60).

Regarding claim 4, Neuman further teaches: the format for said piece of said first sort of music data is defined in MIDI, and the format for said pieces of said second sort of music data is defined in Red Book for compact discs (section 0048).

Regarding claim 11, Neuman further teaches: said data processing unit extracts abrupt changes of an attribute of sound from said pieces of said second sort of music data as said pieces of said reference characteristic data, and said abrupt changes are

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stored in said music data file together with other pieces of said time data representative of timing at which said abrupt changes take place (sections 0030 and 0031).

Regarding claim 12, Neuman further teaches: said abrupt changes are extracted from the entire music passage so that said another music passage is made consistent with said music passage by making said abrupt changes correspond to abrupt changes extracted from pieces of said second sort of music data representative of said another music passage (section 0031).

3. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Neuman in view of Murakami, as applied to claim 1 above, and further in view of Hagiwara et al. (U.S. Pat. No. 6750389).

Neuman in view of Murakami teach the recorder that includes the subject matter discussed above except: an automatic player piano serves as said data source so that said pieces of said first sort of music data are supplied to said interface while a user is fingering on said automatic player piano, and a compact disc loaded into a compact disc driver serves as said another data source so that said piece of said second sort of data are transferred from said compact disc to said interface while said user is fingering on said automatic player piano.

Hagiwara et al. disclose a musical performance control and tone generation apparatus, and teach: an automatic player piano (Fig. 2) serves as said data source (col. 5, lines 41-67) so that pieces of first sort of music data (201-203) are supplied while a user is fingering on said automatic player piano (col. 7, lines 8-20), and a compact disc (401) loaded into a compact disc driver serves as another data source

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(301-303) so that said piece of said second sort of data are transferred from said compact disc to said interface while said user is fingering on said automatic player piano (cols. 5-6, lines 41-16 and col. 7, lines 8-20).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teaching of Hagiwara et al. in the combination of Neuman et al. and Murakami in order to dynamically reproduce synchronized piano tones for an ensemble between an automatic player piano and a playback of a music passage (Hagiwara et al., col. 2, lines 43-52).

Allowable Subject Matter

4. Claims 2, 3, 5-10, 13 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. Claims 16-33 are allowed.

Reasons for Allowance

6. Please see previous Office Action mailed 11/16/2005 for reasons for allowance of claims 2, 3, 5-10, 13, 14 and 16-33.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

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accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Response to Arguments

8. Applicant's arguments received 02/16/06 with respect to claims 1, 4, 11, 12 and 15 have been considered but are moot in view of the new ground(s) of rejection.

Claims 1, 4, 11, 12 and 15 are rejected as new prior art reference (U.S. Pat. No. 4594930 to Murakami) has been found to teach the limitation of argued by tha

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Applicants. Detailed response is given in section 2 as set forth above in this Office Action.

Applicants argued that "Neuman does not disclose the recited data processing unit". This argument is not persuasive. The examiner considers that Neuman's disclosure is not clear about the use of waveform analysis data in generating the reference signal. The combination of Neuman with Murakami's teaching of a data processing unit that extracts and stores reference characteristic data representative of particular features of an audio waveform reads on the claims. The combination of the references is proper. The rejections are maintained.

Prior Art Citations

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1) Furukawa (U. S. Pub. No. 20030101862) is entitled "Music recorder and music player for ensemble on the basis of different sorts of music data".

2) Hagiwara et al. (U. S. Pub. No. 20020178898) is entitled "Musical performance control method, musical performance control apparatus and musical tone generating apparatus".

3) Uehara et al. (U. S. Pub. No. 20030133700) is entitled "Multimedia platform for recording and/or reproducing music synchronously with visual images".

Contact Information

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10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jianchun Qin whose telephone number is (571) 272-5981. The examiner can normally be reached on 8am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on (571) 272-2001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JQ 

Jianchun Qin
Examiner
Art Unit 2837


MARLON T. FLETCHER
PRIMARY EXAMINER